AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions and listings of the claims in this application.

LISTING OF THE CLAIMS:

1. (Currently Amended) A denitrification reactor with a culture fixed to an organized plastic-type support, combined with an installation for the nitrification and elimination of the carbon-based pollution, said reactor being supplied with a mixture of the raw effluent to be treated and of the effluent originating from the installation for the nitrification and elimination of the carbon-based pollution, characterized in that it comprises:

- two denitrification compartments (3, 4) provided with an organized plastic-type lining (8), these compartments, arranged in parallel, operating via successive, i.e. alternating, sections or loads, one being in the filling phase (denitrification and self-cleaning-out of the excess biomass) while the other is in the emptying phase (denitrification and drainage of the excess biomass);

- a drainage compartment (6) for receiving the denitrified effluent originating from one or other of said denitrification compartments;

- a system for supplying the mixture of effluents consisting of a rotary arm (11) which alternately supplies, at the surface, each of said compartments; and

- means (19, 21) for ~~ensuring the recirculation of~~ recirculating the denitrified effluent from the drainage compartment (6) to the installation (2) for the nitrification and elimination of the carbon-based pollution.

2. (Previously Presented) The reactor as claimed in claim 1, wherein the installation (2) for the nitrification and elimination of the carbon-based pollution is a bacterial bed or surface irrigation bed.

3. (Previously Presented) The reactor as claimed in claim 1, wherein the installation (2) of the nitrification and elimination of the carbon-based pollution is a system of aerobic biological filtration in ascending air and water flow.

4. (Previously Presented) The reactor as claimed in claim 1, wherein the installation (2) for the nitrification and elimination of the carbon-based pollution consists of biological disks to which the biomass is attached, these disks revolving around a horizontal axis and being partly immersed in the effluent to be treated.

5. (Previously Presented) The reactor as claimed in claim 1, wherein the lining (8) exhibits a specific surface area of between 50 and 200 m^2/m^3, and preferably of 150 m^2/m^3.

6. (Previously Presented) The reactor as claimed in claim 1, wherein the supply of the raw effluent by means of said rotary arm (11) is carried out using a distribution means (12) receiving the mixture of effluents from a deflector (14) provided under re-uptake means in the floor (13) of the installation (2).

7. (Previously Presented) The reactor as claimed in claim 1, wherein the rate of recirculation, to the installation (2), of the effluent treated in said reactor is of the order of 300%.

8. (Currently amended) The reactor as claimed in claim 1, ~~wherein~~ together with a buffer tank ~~is envisioned in order to smooth~~ for smoothing out the flow rates and the loads.

9. (Currently amended) The reactor as claimed in claim 1, wherein it is integrated into an effluent treatment installation comprising a step of biological treatment, ~~in particular on a bacterial bed~~,

and a step of elimination of the suspended solids and of treatment of the sludge ~~by filtration-composting on beds planted with reeds~~, the effluent denitrified in said reactor (1) being recirculated ~~in the bacterial bed~~ during the biological treatment.

10. (New) The reactor as claimed in claim 9 wherein the biological treatment is performed on a bacterial bed.